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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,271	11/20/2001	Michael C. Smyk	FCI-2632/C3069	9590

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WOODCOCK WASHBURN, LLP
ONE LIBERTY PLACE - 46TH FLOOR
PHILADELPHIA, PA 19103

EXAMINER
HARVEY, JAMES R

ART UNIT	PAPER NUMBER
2833	

DATE MAILED: 11/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

BK

Office Action Summary	Application No.	Applicant(s)	
	09/989,271	SMYK, MICHAEL C.	
	Examiner	Art Unit	
	James R. Harvey	2833	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *RCE filed 9-5-06*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *45-48 and 50-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *45-48 and 50-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *20 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

- The following claim(s) is/are objected to because of the noted informalities:

The following claim(s) is(are) objected to under 37 C.F.R. Rule 1.75 (d)(1). The terms and the phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description.

In reference to Claim(s) 45-48 and 50-51, the recitation "freestanding" is not found within applicant's specification so that it is clear to the public what structure would or what structure would not infringe upon applicant's claims. A examination on the merits (as best understood) is addressed herein.

In reference to Claim(s) 52-54, the recitation "unconstrained" is not found within applicant's specification so that it is clear to the public what structure would or what structure would not infringe upon applicant's claims. A examination on the merits (as best understood) is addressed herein.

-- Appropriate response to the above is required.

Claim Rejections - 35 USC § 102

- The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

- The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim Examination

** Claim(s) 54 is rejected under 35 U.S.C. 102(b) as being anticipated by Sakai et al. (5643018).

-- In reference to Claim(s) 54, Sakai shows (see examiner's figure)

a contact section including a set of converging (near the lead line of numeral 3a'; figure 7) sidewalls that define an insertion pathway for a complementary male terminal, the insertion pathway having a diameter that is smaller than a closed tubular portion that is proximate the set of converging sidewalls; and

a flexible contact element partially disposed within the contact section and retained by the contact section so that opposing ends of the flexible contact element , can move in relation to the contact section. the flexible contact element for urging a complementary male terminal into engagement with a contact section bottom wall;

wherein the female electrical terminal is devoid of any structure prohibiting frontal access to a leading edge of the flexible contact element, and

wherein the flexible contact element does not extend into the set of converging

walls.

■ In reference to the new claim language, as best understood, of unconstrained ends, the reference shows the leading edge (see examiner's figure) is an unconstrained end and the edge opposite to the leading edge is also considered unconstrained.

■ In reference to the new claim language, as best understood, the reference shows the unconstrained ends are seen to be between the first set of walls and the second set of walls (figure 5).

** Claim(s) 45-48 and 50-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al. (5643018).

-- In reference to Claim(s) 45-48 and 50-53 Sakai shows substantially the invention as claimed, as noted below.

However, the smaller tubular portion of Sakai is not closed.

In order to close the smaller tubular portion of Sakai one skilled in the art would increase the length of the extensions 2g (figure 9) of Sakai.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to change the length size of the extensions 2g of Sakai, since a change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 and (CCPA 1955), In re Dailey, 149 USPQ 47 (CCPA 1976).

One skilled in the art would have been motivated to increase the extensions to eliminate another edge (column 4, line 23) and thus decrease the probability of damaging the insertion hole of the stopper (column 4, line 33).

■ In reference to the new claim language, as best understood, of unconstrained ends and freestanding leading edge, they are seen to be claiming the same structure and the reference shows the leading edge (see examiner's figure) is an unconstrained end and the edge opposite to the leading edge is also considered unconstrained.

■ In reference to the new claim language, as best understood, of unconstrained ends and freestanding leading edge, the reference shows the unconstrained ends are seen to be between the first set of walls and the second set of walls (figure 5).

-- In reference to Claim(s) 45, Sakai shows (see examiner's figure)

a contact section for mating with a complementary male terminal, the contact section including a bottom wall; a first set of walls that define a first closed tubular portion with the bottom wall; and a second set of walls that define a second closed tubular portion with the bottom wall, the second closed tubular portion arranged end to end with the first closed tubular portion, the first closed tubular portion having an effective diameter that is less than an effective diameter the second closed tubular portion; and

a flexible contact element at least partially disposed within the contact section ' and retained by the contact section so that opposing ends of the flexible contact element , can move in relation to the contact sections the flexible contact element for urging a complementary male terminal into engagement with the bottom wall,

wherein the flexible contact element does not extend into the first closed tubular portion; and

and the freestanding leading edge is separated from the insertion pathway by the first set of walls (figure 5).

-- In reference to Claim(s) 46, Sakai shows (see examiner's figure) the flexible contact element includes a leading edge (see examiner's figure, column 3, line 20 and column 3, line 23) that is positioned outside of the contact section.

The meaning of "edge" is not set forth in the claims by any structure and is thus deemed to be so broad that it is met by the applied reference showing a line L1 (figure 2) that marks the boundary of an object's image in machine vision (see insert).

edge

Robotics: A line that marks the boundary of an object's image in machine vision.
Mathematics:
1. In graph theory, a member of one of two (usually finite) sets of elements that determine a graph; i.e., an elemen the **edge set**. The other set is called the **vertex set**; each element of the edge set is determined by a pair of elemer the vertex set. Denoted *uv* if the edge is undirected and joins vertices *u* and *v* and denoted (*u*, *v*) if the edge is direc from vertex *u* to vertex *v*.
2. A straight line that is the intersection of two faces of a solid figure.
3. A boundary of a plane geometric figure.

-- In reference to Claim(s) 47, Sakai shows (see examiner's figure) the flexible contact element includes a leading edge, and wherein the female electrical terminal is devoid (figure 2) of any structure prohibiting frontal access to the flexible contact element leading edge.

-- In reference to Claim(s) 48, Sakai shows (see examiner's figure)

a contact section for mating with a complementary male terminal, the contact section including a first closed tubular portion comprising a first set of sidewalls that forms an insertion pathway for a complementary male terminal; and a second closed tubular portion comprising a second set of sidewalls and being arranged end to end with the first closed tubular portion; wherein geometrically central axes of the first and second closed tubular portions are misaligned such that a space is formed outside of the insertion pathway; and

a flexible contact element at least partially disposed within the contact section for urging the complementary male terminal into engagement with the bottom wall, the flexible contact element including a leading edge that is positioned within the space.

-- In reference to Claim(s) 49, it has been cancelled.

-- In reference to Claim(s) 50, Sakai shows (see examiner's figure)

the female electrical terminal is devoid of any structure prohibiting frontal access to the flexible contact element leading edge.

-- In reference to Claim(s) 51, Sakai shows (see examiner's figure)

an opening is defined at an interface between the first closed tubular portion and the second closed tubular portion; and wherein a portion of the flexible contact element extends into the opening (column 3, line 20).

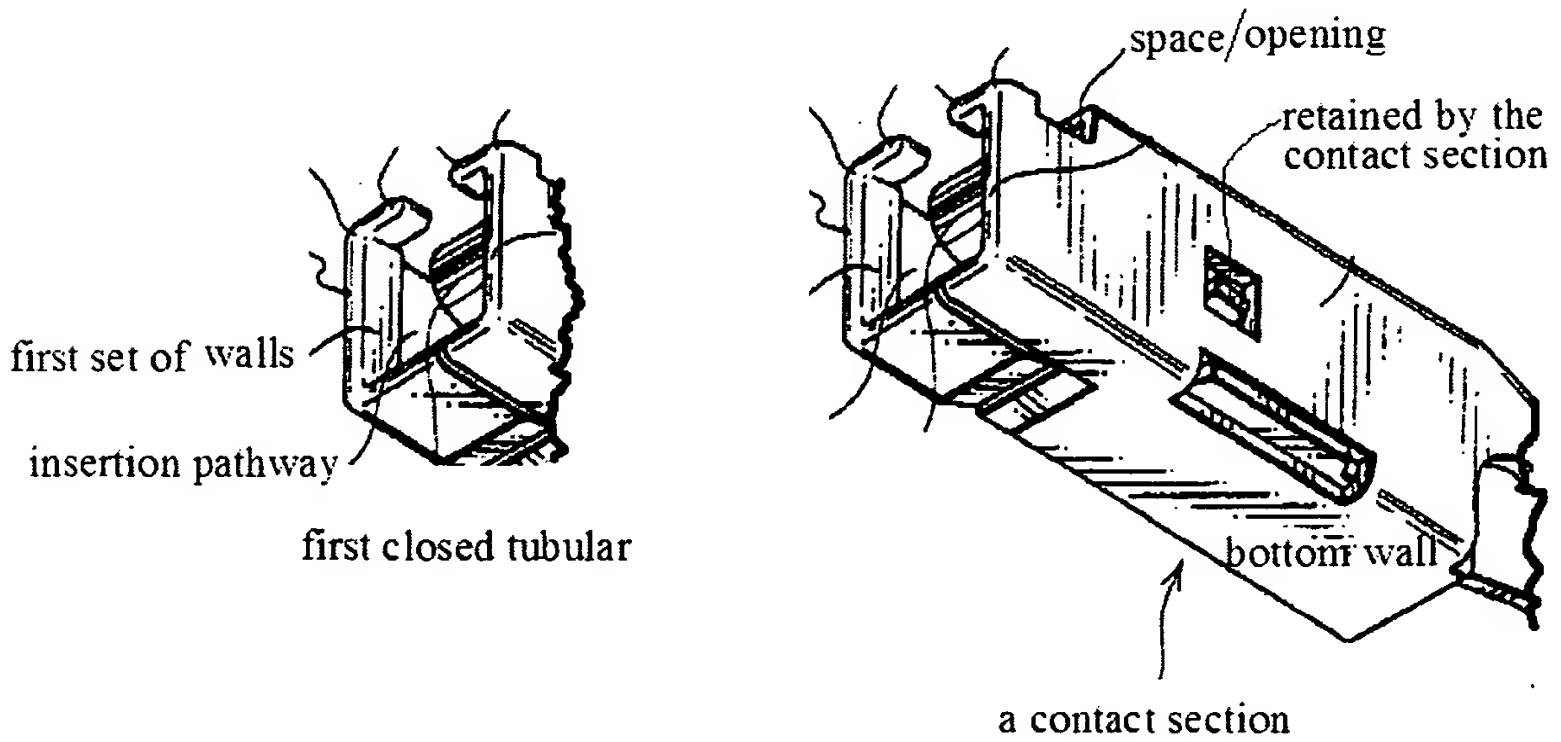
-- In reference to Claim(s) 52, Sakai shows (see examiner's figure)

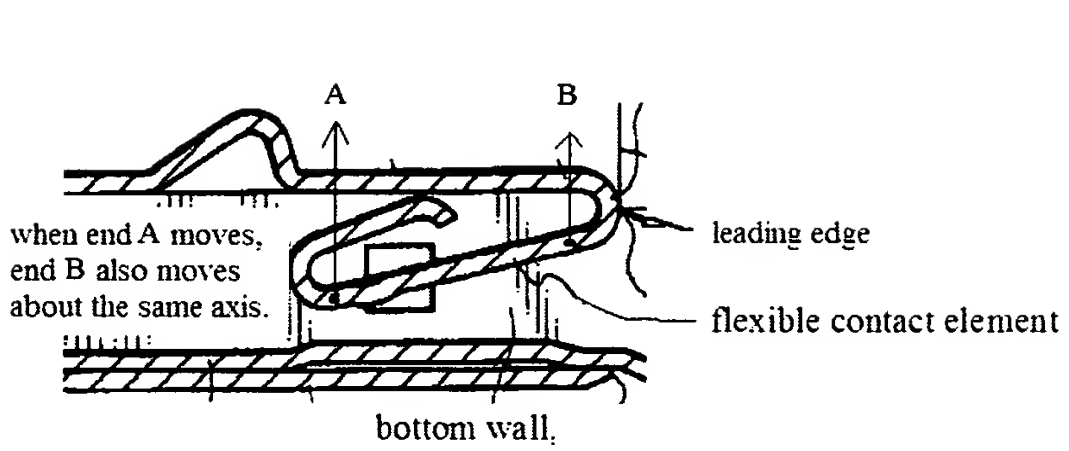
a contact section for mating with a complementary male terminal, the contact section including a first closed tubular portion comprising a first set of sidewalls that forms

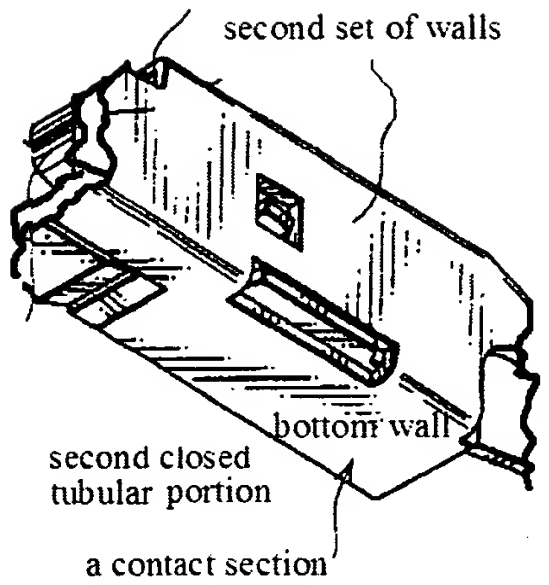
an insertion pathway for a complementary male contact; and a second closed tubular portion comprising a second set of sidewalls and being arranged end to end with the first closed tubular portion; wherein the first closed tubular portion has an effective diameter that is a different size than that of the second closed tubular portion such that a space is formed outside of the insertion pathway; and

a flexible contact element at least partially disposed within the contact section for urging a complementary male terminal into engagement with the bottom wall, the flexible contact element including a leading edge that is positioned within the space; and the unconstrained leading edge is positioned within the space on an opposite side of the first set of walls from the insertion pathway (figure 5).

-- In reference to Claim(s) 53, Sakai shows (see examiner's figure) the female electrical terminal is devoid (figure 2) of any structure prohibiting frontal access to the flexible contact element leading edge.







Applicant's Remarks

In response to applicant's assertion (page 5, lines 13-17) concerning applicant's recitation to "freestanding", the examiner. Applicant's specification does not assign any special structural requirements or any identification to differentiate how the freestanding edge of the reference is any different from the structure that applicant's is claiming.

In response to applicant's assertion (page 6, lines 1-3) concerning applicant's recitation to freestanding leading edge, the examiner is not convinced. Applicant's specification does not assign any special structural requirements or any identification to differentiate how the freestanding edge of the reference is any different from the structure that applicant's is claiming.

In response to applicant's assertion (page 6, lines 16-20) concerning that the reference does not show a leading edge positioned in a space opposite to the first set of walls, the examiner disagrees. Figure 5 of Sakai is seen to show the leading edge (see examiner's figure) and it is seen to be positioned on the opposite side Foley a first set of walls from and insertion pathway.

Conclusion

- Any inquiry concerning this communication or earlier communications from the examiner should be directed to James R. Harvey whose telephone number is 571-272-2007. The examiner can normally be reached from 8:00 A.M. To 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 571-272-2800 extension 33.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2800.

- Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James R. Harvey
Primary Examiner

jrh
November 13, 2006